

WHAT IS CLAIMED:

1. A method of inhibiting desiccation of cuttings from ornamental plants comprising:

treating an ornamental plant with a hypersensitive response elicitor protein or polypeptide under conditions effective to inhibit desiccation of a cutting from the ornamental plant after the cutting is removed from the ornamental plant.

2. The method of claim 1, wherein said treating comprises topically applying the hypersensitive response elicitor protein or polypeptide to the ornamental plant.

3. The method of claim 1, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

4. The method of claim 3, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

5. The method of claim 1, wherein the ornamental plant is a monocot or a dicot.

6. The method of claim 1 further comprising:
removing a cutting from the treated ornamental plant and
applying a hypersensitive response elicitor to the removed
cutting.

7. The method of claim 1, wherein the cutting comprises a stem, a leaf, a flower, or combinations thereof.

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8. A cutting which has been removed from an ornamental plant treated with a hypersensitive response elicitor protein or polypeptide, wherein the cutting is characterized by greater resistance to desiccation as compared to a cutting removed from an untreated ornamental plant.

9. The cutting according to claim 8, wherein the cutting comprises a stem, a leaf, a flower, or combinations thereof.

10. The cutting of claim 8, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

11. The cutting of claim 10, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

12. The cutting of claim 8, wherein the ornamental plant is a monocot or a dicot.

13. A method of promoting early flowering of an ornamental plant comprising:

treating an ornamental plant with a hypersensitive response elicitor protein or polypeptide under conditions effective to promote early flowering of the ornamental plant.

14. The method of claim 13, wherein said treating comprises topically applying the hypersensitive response elicitor to the ornamental plant.

15. The method of claim 13, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

16. The method of claim 15, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

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17. The method of claim 13, wherein the ornamental plant is a monocot or a dicot.

18. A method of harvesting a cutting from an ornamental plant comprising:

treating an ornamental plant with a hypersensitive response elicitor protein or polypeptide and

harvesting a cutting from the treated ornamental plant.

19. The method of claim 18, wherein said treating comprises topically applying the hypersensitive response elicitor protein or polypeptide to the ornamental plant.

20. The method of claim 18, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

21. The method of claim 20, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

22. The method of claim 18, wherein the ornamental plant is a monocot or a dicot.

23. The method of claim 18 further comprising:
applying a hypersensitive response elicitor protein or polypeptide to the harvested cutting.

24. The method of claim 18, wherein the cutting comprises a stem, a leaf, a flower, or combinations thereof.

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25. A method of harvesting a cutting from an ornamental plant comprising:
harvesting a cutting from an ornamental plant and
treating the harvested cutting with a hypersensitive response elicitor protein or polypeptide.

26. The method of claim 25, wherein said treating comprises topically applying the hypersensitive response elicitor protein or polypeptide to the cutting.

27. The method of claim 25, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

28. The method of claim 27, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

29. The method of claim 25, wherein the ornamental plant is a monocot or a dicot.

30. The method of claim 25, wherein the cutting comprises a stem, a leaf, a flower, or combinations thereof.

31. A method of inhibiting desiccation of cuttings from ornamental plants comprising:
removing a cutting from an ornamental plant and
treating the removed cutting with a hypersensitive response elicitor protein or polypeptide under conditions effective to inhibit desiccation of the removed cutting.

32. The method of claim 31, wherein said treating comprises topically applying the hypersensitive response elicitor protein or polypeptide to the cutting.

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33. The method of claim 31, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

34. The method of claim 33, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

35. The method of claim 31, wherein the ornamental plant is a monocot or a dicot.

36. The method of claim 31, wherein the cutting comprises a stem, a leaf, a flower, or combinations thereof.

37. A cutting which has been removed from an ornamental plant, wherein the cutting has been treated with a hypersensitive response elicitor protein or polypeptide and wherein the cutting is characterized by greater resistance to desiccation as compared to an untreated cutting removed from the ornamental plant.

38. The cutting according to claim 37, wherein the cutting comprises a stem, a leaf, a flower, or combinations thereof.

39. The cutting of claim 37, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

40. The cutting of claim 39, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

41. The cutting of claim 37, wherein the ornamental plant is a monocot or a dicot.

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42. A method of inhibiting desiccation of cuttings from ornamental plants comprising:

providing a transgenic ornamental plant or plant seed transformed with a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein and

growing the transgenic ornamental plant or transgenic ornamental plant produced from the transgenic ornamental plant seed under conditions effective to inhibit desiccation in a cutting removed from the transgenic plant.

43. The method of claim 42, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

44. The method of claim 43, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

45. The method of claim 42, wherein the transgenic ornamental plant is a monocot or a dicot.

46. The method of claim 42, wherein the cutting is a stem, a leaf, a flower, or combinations thereof.

47. The method of claim 42 further comprising:
removing a cutting from the transgenic ornamental plant and
applying a hypersensitive response elicitor protein or polypeptide to the removed cutting.

48. The method of claim 42, wherein the hypersensitive response elicitor protein or polypeptide is expressed in tissues of the cutting.

49. A method of promoting early flowering of an ornamental plant comprising:

providing a transgenic ornamental plant or plant seed transformed with a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein and

growing the transgenic ornamental plant or transgenic ornamental plant produced from the transgenic ornamental plant seed under conditions effective to promote early flowering of the transgenic ornamental plant.

50. The method of claim 49, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

51. The method of claim 50, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

52. The method of claim 49, wherein the transgenic ornamental plant is a monocot or a dicot.

53. The method of claim 49, wherein the cutting is a stem, a leaf, a flower, or combinations thereof.

54. The method of claim 49, wherein the hypersensitive response elicitor protein or polypeptide is expressed in flower tissues.

55. A method of harvesting a cutting from an ornamental plant comprising:

providing a transgenic ornamental plant or plant seed transformed with a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein;

growing the transgenic ornamental plant or transgenic ornamental plant produced from the transgenic ornamental plant seed under conditions; and

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harvesting a cutting from the grown transgenic ornamental plant, wherein the cutting exhibits a reduced susceptibility to desiccation as compared to cuttings removed from non-transgenic ornamental plants.

56. The method of claim 55, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

57. The method of claim 56, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

58. The method of claim 55, wherein the transgenic ornamental plant is a monocot or a dicot.

59. The method of claim 55, wherein the cutting is a stem, a leaf, a flower, or combinations thereof.

60. The method of claim 55 further comprising:
applying a hypersensitive response elicitor protein or polypeptide to the harvested cutting.

61. The method of claim 55, wherein the hypersensitive response elicitor protein or polypeptide is expressed in tissues of the cutting.

62. A cutting which has been removed from a transgenic ornamental plant which expresses a heterologous hypersensitive response elicitor protein or polypeptide, wherein the cutting is characterized by greater resistance to desiccation as compared to a cutting removed from a non-transgenic ornamental plant.

63. The cutting of claim 62, wherein the cutting comprises a stem, a leaf, a flower, or combinations thereof.

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64. The cutting of claim 62, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

65. The cutting of claim 64, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

66. The cutting of claim 62, wherein the transgenic ornamental plant is a monocot or a dicot.

67. The cutting of claim 62, wherein the hypersensitive response elicitor protein or polypeptide is expressed in tissues of the cutting.

68. A method of enhancing the longevity of flower blooms on ornamental plant cuttings, the method comprising:

providing a transgenic ornamental plant or plant seed transformed with a DNA molecule encoding a hypersensitive response elicitor polypeptide or protein and

growing the transgenic ornamental plant or transgenic ornamental plant produced from the transgenic ornamental plant seed under conditions effective to enhancing the longevity of flower blooms on cuttings removed therefrom.

69. The method of claim 68, wherein the hypersensitive response elicitor protein or polypeptide is derived from a plant pathogen.

70. The method of claim 69, wherein the plant pathogen is selected from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*, *Clavibacter*, and *Phytophthora*.

71. The method of claim 68, wherein the transgenic ornamental plant is a monocot or a dicot.

FOOTNOTES

72. The method of claim 68, wherein the cutting is a stem, a leaf, a flower, or combinations thereof.

73. The method of claim 68, wherein the hypersensitive response elicitor protein or polypeptide is expressed in flower tissues.

74. The method of claim 68 further comprising:
harvesting a cutting from the transgenic ornamental plant and
applying a hypersensitive response elicitor protein or
polypeptide to the harvested cutting.

75. A method of enhancing the longevity of flower blooms on
ornamental plant cuttings, the method comprising:
treating an ornamental plant with a hypersensitive response
elicitor protein or polypeptide under conditions effective to enhancing the longevity
of flower blooms on cuttings removed therefrom.

76. The method of claim 75, wherein said treating comprises
topically applying the hypersensitive response elicitor to the ornamental plant.

77. The method of claim 75, wherein the hypersensitive response
elicitor protein or polypeptide is derived from a plant pathogen.

78. The method of claim 77, wherein the plant pathogen is selected
from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*,
Clavibacter, and *Phytophthora*.

79. The method of claim 75, wherein the ornamental plant is a
monocot or a dicot.

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80. The method of claim 75 further comprising:
harvesting a cutting from the treated ornamental plant and
applying a hypersensitive response elicitor protein or
polypeptide to the harvested cutting.

81. A method of enhancing the longevity of flower blooms on
ornamental plant cuttings, the method comprising:
harvesting a cutting from an ornamental plant and
treating the harvested cutting with a hypersensitive response
elicitor protein or polypeptide under conditions effective to enhancing the longevity
of flower blooms on the harvested cutting.

82. The method of claim 81, wherein said treating comprises
topically applying the hypersensitive response elicitor to the ornamental plant.

83. The method of claim 81, wherein the hypersensitive response
elicitor protein or polypeptide is derived from a plant pathogen.

84. The method of claim 83, wherein the plant pathogen is selected
from the group consisting of *Erwinia*, *Pseudomonas*, *Ralstonia*, *Xanthomonas*,
Clavibacter, and *Phytophthora*.

85. The method of claim 81, wherein the ornamental plant is a
monocot or a dicot.

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